Traditional Knowledge (Glenn W. Sheehan and Richard Glenn)

[*Dr. Sheehan's presentation incorporated a presentation prepared by Richard Glenn (President, Barrow Arctic Science Consortium). The following are their written versions of the material included in Dr. Sheehan's remarks.*]

"Hearing" the People of a Subsistence Culture: Traditional Knowledge and Environmental Impacts on Alaska's North Slope

Glenn W. Sheehan

Respect between federal agency managers and the people affected by federal actions is a necessity. Before respect must come trust. The federal history on Alaska's North Slope has tended to lead to mistrust between Native residents and federal representatives. For instance, the precursor to the US Department of Energy wanted to detonate an atomic device to create a harbor near the village of Point Hope on the Bering Sea. Their point was to threaten the Soviet Union, but they only consulted the people of Point Hope as an afterthought, almost by accident.

Those Iñupiat Eskimo of Point Hope eventually derailed the project, but not before various experiments released radionuclides on the tundra (O'Hara et al 1999). Again, very few local people knew what was happening. Today, it is still difficult for people to accept federal statements that the remaining contamination is harmless.

Amchitka Island in Alaska is the site of the largest bomb that the US ever exploded underground. People knew about the explosion, but any local or regional effects were a mystery, because such effects were secret. Now people wonder if the effects were kept secret to deny knowledge to the Soviets, or to deny knowledge to Alaskans.

Local people that I know were treated with radioactive iodine in a "zany" experiment to see if it would affect their susceptibility to cold. These Native people did not speak English at the time, and they were not told what was happening; in fact, they were given lies. Now when some of them get cancer they are convinced, perhaps rightly, that it was Western scientists who did this to them. This history of our federal government not trusting local people with information vital to their lives is something that people working today in Alaska must confront and overcome.

Honesty, full disclosure and consultation will work to recreate trust. But consultation, to be effective, must be a two-way street and that requires more than trust. It requires respect by each side for what the other brings to the table.

Federal managers bring knowledge based on and interpreted through the Western scientific tradition. Natives bring knowledge based on active personal experience and on historical community experience, and this can be called Traditional Knowledge (TK).

As recently as World War II so little was known in the rest of the US about northern Alaska that the Navy had to fly residents to Washington to consult about how and where to locate military installations. As recently as a generation ago almost every motor vehicle in Barrow belonged to the government, but of course there were no roads. Only a century ago the people of the North Slope represented the most extreme edge of hunter-gatherer societies, relying almost totally on hunting, mainly hunting marine mammals and mainly bowhead whales.

Their Native economy was tied to trade in sea mammal oil and caribou products. Their lives in the extreme northern environment depended on doing things right. Doing things right meant first, being a keen observer of the environment and of society; and second, it meant learning the skills, methods and experiences of the Elders and those who had gone before, leaving Traditional Knowledge (TK) as their bequest.

There was an oil spill in the Beaufort Sea near Barrow in 1944. Unfortunately the Navy ran one of their ships aground after listening to but not "hearing" their Native consultants, who gave them sailing directions (Tommy Brower ms). Then, not listening to advice on how to get off the island, they pumped 25,000 gallons of bunker fuel oil over the side to refloat themselves. It was the war, and they had to get moving.

The Iñupiat Eskimo who lived and hunted there noticed that for several years marine mammals avoided the spill area, which had been a rich hunting location for generations. There were other effects. Unfortunately, none of this is part of our background information for planning for oil spills in the Arctic or for predicting their effects. The knowledge has remained with the hunters. No federal effort has been made to follow up on the spill.

Oil on the North Slope was "discovered" by the West when Native knowledge of natural oil seeps was shared with Westerners. How much more would we know about the effects of oil spills in the Arctic if Westerners had asked to share Native knowledge of the effects of these seeps upon flora and fauna, and upon ice?

What are the risks of development? Federal managers are tasked with identifying and assessing these risks. The way you look at the world determines what you will or can deduce about the world. Western science, among other things, is a way of looking at the world. That "Weltanschauung" helps determine what you see. As Steve Picou states, "Science is socially constructed" (MMS Conference, August 24, 1999). That social construct both focuses vision and adds blinders.

Some areas that have been developed for their oil are out of bounds for subsistence hunters. That was an unforeseen consequence because the question of risk was not posed in a way that allowed such a result to be envisioned.

Traditional Knowledge (TK) means "the accumulated body of information that may be said to form a worldview" but TK is also used to refer to raw data (uninterpreted observations) and also to information, i.e., analyzed or interpreted data; TK is "non-Western sources of information on environmental processes and elements" (Wenzel 1999:114). The accumulated body of information is carried by living people and is built from their observations and experiences and from the observations and experiences of their predecessors.

Can Traditional Knowledge survive modern life? In 1905, Stefansson (1913) observed that of the entire population of the village of Barrow, there were only about two dozen people lineally descended from the village's original inhabitants. Yet whaling-dependent culture survived this population replacement and thrives to this day.

Whaling is the organizing focus of coastal Iñupiat society today and has been for a thousand years (Sheehan 1997). Jobs in North Slope communities are organized so that people can take subsistence leave to hunt at appropriate times of the year. Whale hunting requires cooperation within and between crews. Large numbers of people are required to bring in and butcher the whales. The whale harvest is shared within and between communities. Just as telling, the easiest way to bring a smile to someone's face is to start a discussion about whaling.

Is TK hidebound? Does traditional mean unchanging? Charles Brower was the first Westerner to settle in Barrow, back in the 1880s (Charles Brower ms). He began harvesting whales, and the local whaling captains were surprised to see that Brower planned to use iron harpoon heads in the hunt. They told him that whales did not like iron and would refuse to give themselves up to anyone using iron harpoon heads. Brower said he would try anyway.

Brower had a successful season. Tradition stated he should have failed. The whaling captains incorporated this new experience, they did not try to rationalize it away. They asked if they could borrow some iron harpoon heads to use themselves the next season. As Barrow resident Richard Glenn notes "Our culture is changing, and some day we may be learning 'traditional knowledge' using the same techniques employed by those today who are outside looking in" (this volume). This does not negate Traditional Knowledge, it verifies that TK is a living instrument that functions for its society, and in order to keep on functioning it encompasses and adjusts to new methods and new information.

TK was not static, at least not in the north. Part of what TK imparted to people was a pragmatic approach to life: people used and did what worked and they

valued tradition not as tradition but as a means to be successful. Adherence to traditions, as opposed to valuing TK, could only lead to disaster in a life where one mistake could mean death, where one missed stitch could lead to hypothermia, where one miscalculation could lead to endless drifting on an ice pan. One failed whale hunt might be survived as villagers called on trading partners and friends and relatives in other villages and inland for help. Two failed harvests would be deadly. Adaptability is a mainstay of Traditional Knowledge in the north.

Research into prehistory provides examples of adaptability (Sheehan 1990, 1997). When we excavated at Point Franklin on the Chukchi Sea we found that Eskimo whalers many generations ago had built traditional style permanent semi-subterranean houses there. The location at that time was a sandy island. Our excavations revealed that the builders had to change their approach to construction as they became familiar with the sandy soil, which was quite different from the clayey and peaty soil of the mainland.

The dugout foundation for one house collapsed inwards as the sandy walls thawed upon exposure to the air. Rather than continue to excavate downwards to reach the traditional depth for a new house, the builders threw materials into their excavation to stabilize it, then built the driftwood house at a higher than traditional level. They compensated by adding more insulating and stabilizing material to the exterior of the house.

Most of the insulation was stacked blocks of sod. But that traditional method also proved problematic. The Arctic is a desert. The dry winter winds tended to strip the snow away from the base of the sods that were piled against the house walls, exposing the sand upon which they rested. As the exposed sand dried, the sand began to blow away, undermining the house's insulation. In at least one instance, the builders took this into account by pouring whale oil over the sand before stacking the sods. The oil proved a potent and durable binder that kept the sand in place.

Traditional kitchens also were semi-subterranean. We examined a kitchen whose footprint was excavated into the sand. The traditional next stage was construction of the superstructure. In this case, we imagine the lady of the house intervened. The sandy floor was soaked in whale oil. Then the whale oil was set afire. The innovative result was "Eskimo concrete!"

The burning oil created an impenetrable and permanently hard floor ("clinker" in archaeological field jargon) in place of what would otherwise have been a perpetually gritty surface upon which to prepare meals. Once the floor was hardened in this way, building of the superstructure proceeded. TK provided the mental blueprints for construction. TK's adaptability allowed those blueprints to be modified to fit the sandy reality of Point Franklin.

Is TK esoteric? Does TK consist only of things that are ephemeral or of no practical importance to the Western world? In the 1930s Tommy Brower, one of Charles Browers' sons by his Iñupiat wife, was returning to Alaska by ship. The ship's captain refused to consider ice avoidance tactics suggested by Tommy, and the ship was stove in. Tommy asked the Captain how long the ship had before it sank and the captain gave an estimate. Tommy then left the ship out of sight of the captain, running on the ice and then on the beach until he got home. Cracking his father's safe, Tommy acquired a considerable amount of cash. He returned to the ship dressed in his Native garb, and the captain did not recognize him.

Tommy offered to buy the ship for $10,000 cash. His conditions were that captain and crew could take whatever they could carry without returning for more, and that they all had to be gone within the hour. The captain accepted the deal. Shortly after the last of the crew got onto the ice, the ship settled another few feet onto the bottom.

Tommy made his first fortune stripping the ship while she sat there. The ship itself was eventually crushed and sunk (Thomas P. Brower ms). Traditional knowledge of ice activities and of shoals was, in this case, by no means esoteric.

What can TK mean to pragmatic everyday management activities? Calvin Moto, the Mayor of Deering, on the Seward Peninsula, has given me permission to relate this episode.

Some years ago Calvin and several other Deering residents were employed fighting a tundra fire (personal communication 1999). Calvin was on a ridge when he saw the foreman lighting a fire in an unburned area. He asked a companion what the foreman was doing and learned that this was supposed to be a backfire. "Better get ready to run," Calvin responded.

Calvin took the ATV (all terrain vehicle) and sped to the work crew. "Jump in, throw your tools in the trailer and let's go." They got to a lake just in time. Calvin describes the new fire as sounding like a train and moving a mile a minute. "You see that wall of fire come and your hair stands on end."

When confronting the foreman, Calvin was told "I'm an expert on fires in Montana." Calvin replied that "Your fires in Montana are different from ours. See those young people? You know how long it took us to raise them? I'm going to take them home. Every day between twelve and two o'clock in this place behind the hills the wind shifts." From then on the Montana expert and the local experts consulted.

TK can raise a flag to managers that further investigation and consultation is needed when TK conclusions vary from Western scientific conclusions. At times the Western worldview or Weltanschauung almost ensures that something critical

will be overlooked, and in some of those instances a view from the perspective of Traditional Knowledge pays off handsomely.

In the recent past in the north, societies and families did not keep much in reserve. The energy expenditures to hunt and to manufacture every item needed in daily life were too great to waste on reserves "just in case." So the margin for error was thin. Correspondingly, the need for accurate information and safe, efficient methods was great.

TK has been and is a living body of knowledge. TK is not archaeology, not "a snapshot frozen in time", but something that is re-affirmed, added to or changed daily. TK is constantly tested. This testing establishes reliability and gives people the courage to stand up for what they know.

TK has its own-built in reliability calculator. Starting with the most reliable, it is as follows.

> I experienced...
>
> I was told by someone who experienced...
>
> I was told by someone who was told...

Captain Maguire (1988) recorded an example that combines TK's three levels of reliability. Maguire twice overwintered in Elson Lagoon next to Point Barrow and the village of Nuvuk in the early 1850s. Expanding his own geographic knowledge, he questioned residents about the coast towards Canada to the southeast and towards Point Hope to the southwest. Their knowledge included firsthand experience, reports from other travelers, and information handed down to them. Captain Maguire learned that almost all of Nuvuk's adult Eskimo residents were intimately familiar with up to 600 miles of Arctic coastline, and their degree of accuracy exceeded that of the Western explorers and mapmakers.

Does TK actually incorporate knowledge from the past, and how accurate is something that "you were told by someone who was told?" In 1981, Elders told us in Barrow that a ceremonial center, or qargi, had once been located on a certain mound in the old village of Utqiagvik (Sheehan 1990). They stated that they had been told of the location as children by Elders, who in turn had been told of by their own Elders. In 1982 I excavated the mound, revealing a 500-year old qargi.

What are the impacts of ignoring TK? Researcher and manager survival is one potential impact. TK provides time-tested clothing for severe conditions, and time-tested ways of responding to certain life and death dilemmas. At least in the

north, the "just in time" concept currently so popular with industry has been in use for generations.

Kenneth Toovak, an Iñupiat Elder, worked for many years assisting researchers at the old Naval Arctic Research Laboratory in Barrow, Alaska. Kenneth has spoken of one such instance (Toovak personal communication). Researcher John Kelley approached Kenneth and said "Kenny, I'd like to go out to Point Barrow by boat to do some work. Would you get a boat ready and take me out?"

Kenneth said "John, not just now." A while later John came back. "Kenneth, I really need to get out there, can you get a boat ready so we can go to the Point?" To which Kenneth replied "John, I don't like the look of the sky right now. Why don't you wait?"

John Kelley (personal communication) finally came back and said, "Look, we have to get out there, I don't have much time before I have to leave Barrow and this work is really important." Kenneth said "John, I'll get the boat ready, but you'll have to go by yourself."

This set John back a bit, and he agreed to wait. Only minutes later strong winds developed that would have endangered the boat and its occupants. Kenneth says "I knew what was happening, I didn't want to go in conditions like that." John says, "The sky looked perfectly fine to me, I would have gone out with no hesitation."

The International Whaling Commission (IWC) once denied the Iñupiat's right to hunt whales by giving them a zero harvest quota. When a people's social and cultural life revolves around the shared tasks and shared harvests of whaling, this is a very cruel blow. The IWC stated that there were just not enough bowhead whales to allow any of them to be harvested. The fact that Yankee commercial whaling had decimated the whales, and that Iñupiat subsistence whaling had not hurt the whale population during their 1600 years of whaling was considered irrelevant.

Worse, the statement by the whaling captains that the IWC bowhead whale population estimate was wrong, and that there were many many more whales than the IWC imagined, was discounted and met with disbelief. TK bearers can tell you their experiences and how they have come to believe what they believe. However, "Scientists can tell you the details of their methodology" (Steve Picou, MMS Conference, August 24, 1999). The IWC preferred to believe, the IWC had faith in, Western science, and saw no way of reconciling Western science and Traditional Knowledge.

The Iñupiat spent two decades of work and millions of dollars on Western-style science to demonstrate that their Traditional Knowledge-based estimates of bowhead whale numbers were scientifically accurate (Tom Albert personal

communication). A happy ending? Yes. But who will repay the Iñupiat? Who will respect and trust the bearers of Traditional Knowledge in the next dispute? When will the hunters feel that scientists are not more than a little dangerous?

Oceanic oil and gas exploration entails use of oceanic seismic tests. Iñupiat subsistence whalers have testified repeatedly that whales react to seismic tests by diverting from their normal feeding and travel areas, and by exhibiting more wariness when approached by hunters. Much of this "eye witness" testimony remained unrecognized or diminished in value in most Environmental Impact Statements. The Minerals Management Service (MMS) nonetheless acted upon a Western scientific belief that placed the "radius of disturbance" at around 10 km. Only when money and time had been spent upon a more appropriate scientific study (Richardson 1998) was it acknowledged that the radius of disturbance is at least 20 km, probably more, as the Iñupiat whalers have stated all along.

I have seen a Navy document that admits that some Barrow-area erosion may be the result of their massive nearshore gravel borrowing operations. Tommy Brower told me he had remonstrated with the Navy and tried to prevent the gravel extractions, predicting increased erosion (Thomas P. Brower ms). At the time, this possibility was dismissed by Navy engineers.

Ignoring TK and those who wish to share it is demoralizing and can lead to a refusal by Native people to cooperate. Managers and scientists sometimes do not accommodate TK because they cannot acknowledge that their own "scientific" viewpoint is relativistic.

"Since at least the late 1980s, anthropologists... and other northern researchers... have widely critiqued Western science as it relates to Traditional Ecological Knowledge...", so that some focus on "what may be inherent points of epistemological conflict between Traditional Ecological Knowledge and science, especially their respective methodologies and the established premises of each" (Wenzel 1999:116).

Wenzel cites the findings of Bielawski (1992:7) that some areas of research, such as geology and biology, "have intentionally sought not to incorporate Inuit within their spheres of inquiry," exemplified by the statement of one scientist that "In such research, people are overburden" (Wenzel 1999:116).

Within the literature on Inuit, there is commonly "a point of intellectual discussion that contrasts Traditional Ecological Knowledge's essential 'differentness' in formulation and transmission with Western scientific knowledge and practice..." so that many investigators have "emphasized the methodological-philosophical distinctiveness of Traditional Ecological Knowledge from Western science" (Wenzel 1999:115).

"For a long time, Western discourse has tended to radically separate scholarly knowledge and everyday understanding. Schooling and science, it has often been assumed, involve the objective exploration and modeling of reality, on the basis of rational methods and detached observations, while 'lay' or 'folk' understanding presumes a particular and limited world of local concerns. One of the consequences of such a 'modernist' scheme is the tendency to both glorify science and reduce local knowledge to mere trivia" (Palsson and Helgason 1998:908-909).

What are the impacts of hearing but not fully considering TK? It is demoralizing. The Native experience in relating TK to Western scientific knowledge has been that sometimes a "discount" is placed on their Traditional Knowledge (Jensen ms). Or sometimes there seems to be no reaction whatsoever. Hence, "MMS has no ears!"

One of the rare instances of a public demonstration on the North Slope occurred in 1997 when the public and local government attendees at a US Minerals Management Service (MMS) meeting walked out of the meeting en masse and set up outside. People waved homemade cardboard signs and chanted "MMS has no ears!"

MMS had listened but not heard. MMS had dutifully recorded information and comments, but had not internalized or in any other way seriously dealt with them. In fact, scientists' comments, which are based on comparatively brief periods of research in the Arctic, are quoted at length and acted upon in federal reports, while hunters' comments rarely have been printed, although the hunters draw on generations of accumulated Traditional Knowledge.

Aside from courtesy and simple justice, why is it important that Natives be heard? Pragmatically, as shown by the whale count and the underwater sound issues, TK often has answers to questions that otherwise will be left open and therefore unacted-upon while expensive long-term studies are commissioned and take place. Just as importantly, development activities are impacting communities to the extent that subsistence activity (AKA culture) is changing in response to development, and a prime way to assess the impact is through people's words.

TK can help managers mitigate social impacts of development by recognizing groups on a non-political basis (i.e., not based on precincts or congressional districts, but on the basis of knowledge sharing). This mitigates the possible impression that groups of people are not valued or even recognized on the basis of their own self-identification; after all, the internal and external sharing of TK can help reinforce group identity, just as the ignoring or perceived denigrating of TK questions the group.

TK is contextual. An individual builds it up and comes to know it over a lifetime. The use of TK is critical to both "holders" and to "managers." How do we retain

and use TK for everyone? Consultation is necessary and helps to avoid misinterpretation of archived TK.

Wenzel commends as "sensible" the Tri-Council of Canada's methodology for the ethical conduct of research:

> There are many situations where collectivities may wish to react to the findings... It is usually inappropriate for the collectivity to seek (or to be given) a veto on report findings. At the same time, it is inappropriate for researchers to dismiss matters of disagreement... without giving them due consideration... Where any disagreement persists, it is a minimal requirement that researchers provide the collectivity with an opportunity to make its views known. Failing agreement, researchers should accurately report any disagreement on interpretation of the data in the final report. (Tri-Council of Canada 1997:VII-7f cited in Wenzel 1999:121).

We should follow Richard Glenn's lead (this volume) and make the TK database that has been assembled for "managers" also available as a resource for the TK holder as well as for federal decision makers. That is what we hope will happen with the database being created for MMS through a contract with the Ukpeagvik Iñupiat Corporation (UIC) Real Estate Science Division. The project attempts to collate and provide a basis for contextualizing North Slope of Alaska Traditional Knowledge so that managers and others can use it effectively in their decision making about research and policy issues.

The fashion in which modern life is organized in today's north follows a Western pattern, interfering with the daily and seasonal schedules of the recent past. This incompatibility is a crisis for Traditional Knowledge, which has been learned and passed on through intensive and long periods of watching and participating. Westernized schedules interrupt this process. A properly organized TK database can serve as a learning tool, helping people to overcome scheduling conflicts and helping to keep TK viable in the future. The current MMS/UIC Traditional Knowledge project is not geared to this, but stands as a first step upon which others can capitalize.

Acknowledgments

Especially in a paper dealing with Traditional Knowledge it is important to acknowledge those people who have directly or indirectly assisted in the work. These include Mr. Kenneth Toovak, Board Member of the Barrow Arctic Science Consortium; Dr. John J. Kelley, Institute of Marine Biology, University of Alaska Fairbanks; the Honorable Calvin M. Moto, Mayor of Deering; my wife, Ms. Anne M. Jensen, Ukpeagvik Iñupiat Corporation; Dr. Tom Albert, North Slope Department of Wildlife Management; Dr. Todd O'Hara, North Slope Department of Wildlife Management; Mr. Richard Glenn, President of the Barrow Arctic

Science Consortium; and the late Thomas Paneahtak Brower, who worked on his life history with me because "maybe younger people will learn something from it."

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Traditional Knowledge, Environmental Assessment, and the Clash of Two Cultures

Richard Glenn

Native American people have since the time of the first European contact struggled with the idea of sharing with the outside world a storehouse of raw information, truisms, philosophies and ways of life. This storehouse, wrapped in a big blanket and named by the outside world as 'traditional knowledge,' has been obtained (as in any culture) over time by observations of nature, trial and error, dogged persistence and flashes of inspiration. In cultures without a written history, such as our Alaskan North Slope Iñupiat culture, this knowledge is passed person to person, through social organizations and individual training, as well as through stories and legends.

Our culture is based on a knowledge of the natural environment and its resources. Knowledge of the arctic tundra, rivers and lakes, of the lagoons and oceans and all of the food resources they provide is our foundation. Further, knowledge of snow and ice conditions, of ocean currents, weather patterns and their effects on natural systems becomes necessary for navigation, finding and trailing game and locating shelter and each other. This knowledge has value.

First, to pass amongst each other and on to our children, and, second (should we decide to) to pass it on to those outside of our culture.

To someone unfamiliar with the Iñupiat culture or the arctic environment (such as a youngster or an outsider) the storehouse of information must seem near infinite and inaccessible. And, stereotypes abound - amongst ourselves and in the eyes of outsiders. Legends of the 'hundred different terms for snow... or ice' serve to perpetuate the mystery. For outsiders, in addition to the stereotypes, there is a stigma: bad experiences too numerous to count that began by good-faith sharing of traditional knowledge with outsiders. These range from simple plagiarism to exploitation and thievery. Here, too, legends and stereotypes abound. Such experiences have led many Iñupiat people first to ask 'Why share?' And even if this challenge has been answered sufficiently, an equally difficult challenge remains for both sides: 'How to share?'

Why Share?

Why do we share our traditional knowledge? Despite the stigma, our community is proud of a long history of productive cooperative efforts with visiting researchers, and proud of hunters, travelers and other experts lending their support to visiting scientists, map makers and others. Why? We share when we consider others as close enough to be part of our own culture, and we share when we think it is in the best interest of a greater cultural struggle.

Experts Sharing With Each Other

The question of 'why' is always easy to answer when two individuals are sharing equally and the joy of discovery takes place on both sides. Examples in our own hundred-year history of cooperation serve as good models: the wildlife biologist and the whaler, the nomadic traveler and geologist, the archaeologist and the village elders. This two-way exchange has often worked when a given researcher has been around long enough to be considered 'one of us', or at least has displayed to the community that he possesses some common values.

Sharing for the Greater Good

For a more locally important reason, we share traditional knowledge when we believe that it will lead to preserving our land, our resources or our way of life. This reason has prodded us to work hard with regulatory agencies and other organizations to develop policies, to draft environmental impact statements or to offer even the most specific knowledge of the environment, wildlife or cultural practice.

Sharing as a Part of Iñupiat Education

A third reason exists: Pure instruction. Like a teacher to a student, our elders and experts teach the rest of our community in any facet of traditional knowledge. We share to perpetuate our culture. How does one become involved in this kind of sharing? The answer is simple: Become a student. However, this can take a lifetime, pairing with a given expert over years of learning. Chances are that the teacher himself is learning, too. This is the method most commonly used by our own people to transfer knowledge amongst ourselves. Our culture has many vehicles to allow this kind of instruction to take place. This method, too, faces challenges due to changing culture, loss of language and other factors.

How to Share?

How can an outsider partake in any of the vehicles of sharing traditional knowledge? Choose one or all of the three criteria: engage in an exchange among experts, become part of an effort that is of value to our people, or remain in the community and become a real student. Any other method risks lack of context, data gaps from abbreviated efforts and other such problems.

Current Efforts

Funding exists in many government agencies for programs that elicit traditional knowledge. These programs can be found from NSF to NOAA to MMS. Recently these efforts have drawn praise from outside quarters, as it demonstrates that the government has 'validated' traditional knowledge. Yet, even so, we are still struggling with the very agencies that have given traditional knowledge some credibility. Why is this? In many instances the goal of eliciting traditional knowledge is a short-term project objective for an effort that might necessarily take a lifetime.

A common problem many agency efforts face is that they try to gather traditional knowledge in 'non-traditional ways'. They hold public meetings, offer copies of documents for comment or rely on whatever political leadership happens to be in place. Another vehicle in vogue for agencies is the contract with a Native organization.

Native tribal organizations, profit and non-profit corporations and rural and local governments all represent some aspect of a Native constituency. So, because the groups have some legitimacy in attempting to be the bridge between traditional knowledge and the outside world, a contract is developed. The contractor must somehow assimilate, document and contribute traditional knowledge. Thus, what should take: 1) years of heart to heart collaboration between experts, or 2) a whole army of local energy focused on a single issue, or 3) years of tutelage under a suite of instructors must now must be completed before the contract deadline (usually a period of weeks to months). Here, the

government can wash its hands of the issue. It looks appropriate; it's in the Natives' hands. And, the Native organization, hungry as it should be for grants and contracts from the 'feds', offers to carry the obligation. Again, contract and project timelines become the targets, and we collect what we can while we can. Quality may suffer, content and context as well.

Knowing that change happens slowly, and that agencies can only do so much, it is reasonable to assume that what is presently occurring will continue. Meetings to assess traditional knowledge will undoubtedly go on. With this in mind, there are a few more cautions to those interested in documenting traditional knowledge, learning about the environment without reinventing the wheel and working with Native communities on regionally important issues.

Choose the Forum with Care

A meeting's attendees must be matched to the issue. When expertise is really needed, it should be stated. Stereotypes will allow any agency to assume the expertise is there. There is a scene from the movie *On Deadly Ground* where the leading actress (an Oriental woman playing a Yup'ik) jumps on a horse to the surprise of Steven Seagal's character. He asks, "You can ride a horse?" to which she answers, "Of course, I'm Native American!" A comical analogy, but not far from the mark from many real life stereotypes.

Don't Put Your Eggs in One Basket

Check sources. Stated another way, the most talkative person may not be the most knowledgeable. Ours is a culture of consensus. Agreement is mandatory on nearly every item passed as traditional knowledge. If one person stands alone, he may be an expert, or he may be wrong.

Given the size of the task, it is easy to run away from documenting traditional knowledge for use by others, even for our own internal reasons. For many, it can be an intensely personal endeavor. Still, such documentation will continue - by our own people as well as by outside groups. Our culture is changing, and some day we may be learning 'traditional knowledge' using the same techniques employed by those today who are outside looking in. We may be learning of our own traditional knowledge as if it belonged to others. Just as today in many places we are learning our own language as if it were a foreign language. As long as we are pledged to the task, we should look past the requirements of this contract or that mandate and remember the quality of information, time-tested and true. With everything changing, it is a valuable reference plane. If it is not where we are going, at least it is where we are coming from.